

ABSTRACT

A method of manufacturing a hybrid structure (100) having a layer of CMC material (28) defining an interior passageway (24) and a layer of ceramic insulating material (18) lining the passageway. The method includes the step of casting the insulating material to a first thickness required for effective casting but in excess of a desired second thickness for use of the hybrid structure. An inner mold (14) defining a net shape desired for the passageway remains in place after the casting step to mechanically support the insulating material during a machining process used to reduce the thickness of the insulating material from the as-cast first thickness to the desired second thickness. The inner mold also provides support as the CMC material is deposited onto the insulating material. The inner mold may include a fugitive material portion (20) to facilitate its removal after the CMC material is formed.